ABSTRACT OF THE DISCLOSURE

A telecommunications system and method is disclosed for mapping the Transcoder/Rate Adaptor (TRAU) protocol onto a User Datagram Protocol (UDP) for use in an Internet Protocol (IP) based Base Station System (BSS) architecture. All in-band control bits in the TRAU protocol are not relevant when using the UDP protocol. Therefore, when speech information is mapped onto a UDP datagram for transfer to the Channel Codec Unit (CCU) in the Base Transceiver Station (BTS), some of the information normally transferred between the CCU and the TRAU can be removed. For example, the Time Alignment command included in some of the frame types is not needed, and should be removed. In addition, the bits relating to the frame structure, such as the TRAU synchronization bits, tail bits and spare control bits, should be removed from all frame types. Furthermore, a new control bit that contains a sequence number must be added to handle reordering of the packet data stream.